

REMARKS

This Amendment and Response to Non-Final Office Action is being submitted in response to the non-final Office Action mailed September 21, 2005. Claims 1-17 are pending in the Application.

Claims 1-15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Nicoll et al. (U.S. Patent No. 6,356,563) in view of Beser et al. (U.S. Patent No. 6,654,387). Claims 16 and 17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Beser et al. (U.S. Patent No. 6,654,387) in view of Akatsu et al. (U.S. Patent No. 6,378,000) and in further view of Weiman (U.S. Patent No. 6,141,690).

In response to these rejections, the Claims have been amended herein, without prejudice or disclaimer to continued examination on the merits. These amendments are fully supported in the Specification, Drawings, and Claims of the Application and no new matter has been added. Based upon the amendments, reconsideration of the Application is respectfully requested in view of the following remarks.

Rejection of Claims 1-15 Under 35 U.S.C. 103(a) – Nicoll et al. and Beser et al:

Claims 1-15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Nicoll et al. (U.S. Patent No. 6,356,563) in view of Beser et al. (U.S. Patent No. 6,654,387). Claims 1 and 10 are independent claims.

Examiner states that Nicoll et al. substantially teach the invention as claimed including a method comprising the steps of assigning a first address of a first network protocol to each of a first plurality of sites of a first network and to each of a second plurality of sites of a second network internetworked with the first network, the first

network conforming to the first network protocol and the second network conforming to the second network protocol (Col. 3, lines 41-48).

Specifically in regard to Claim 1, Examiner states that Nicoll et al. recite a method of automatically mapping network addresses of a first protocol for a plurality of network elements in a first network to network address of a second protocol, comprising the steps of: assigning an address corresponding to the first protocol for each network element of the plurality of network elements (Col. 3, lines 9-67); assigning an address corresponding to the second protocol for each network element of the plurality of network elements (Col. 3, lines 9-67); associating addresses corresponding to the first and second protocols within the table for each network element of the plurality of network elements (Col. 3, lines 9-67), the second protocol being a different protocol than the first protocol (Col. 3, lines 9-67); and wherein each of the network elements utilize the first protocol addresses to transmit data destined for other network elements via the first network.

Examiner states that Nicoll et al. do not specifically teach “defining a table maintained in each network element of the plurality of network elements”. However, Examiner states Beser et al. teach the maintenance of a network address table such as an Address Resolution Protocol Table (Col. 3, lines 13-15) and further teach associating a time value with a network address (Col. 3, lines 43-48). Examiner notes that although Beser et al. fail to teach the address mapping with identifier assignment, that it would have been obvious at the time of the invention for one of ordinary skill in the art to combine the use of a global addressing and identifier assignment in inter-worked networks as taught by Nicoll et al. with the maintenance of a network address table taught by Beser et al. Examiner further states that such a system would provide a method to map an IP address to another protocol address and prevent entries in the tables from becoming stale by flushing the tables at the expiration of a specified time and a user may enjoy improved resource allocation and security in such a system.

In response to this rejection, independent Claim 1 has been amended to recite:

A method of automatically mapping network addresses of a first protocol for a plurality of network elements in a first network to network addresses of a second protocol, comprising the steps of:

defining a table maintained in each network element of the plurality of network elements;

wherein the table maintained in each network element of the plurality of network elements is built automatically;

assigning an address corresponding to the first protocol for each network element of the plurality of network elements;

assigning an address corresponding to the second protocol for each network element of the plurality of network elements;

associating the addresses corresponding to the first and second protocols within the table for each network element of the plurality of network elements, the second protocol being a different protocol than the first protocol;

advertising an association of the addresses corresponding to the first and second protocols, allowing each network element of the plurality of network elements to build the table; and

wherein each of the network elements utilize the first protocol addresses to transmit data destined for other network elements via the first network.

The two steps ***wherein the table maintained in each network element of the plurality of network elements is built automatically*** and ***advertising an association of the addresses corresponding to the first and second protocols, allowing each network element of the plurality of network elements to build the table*** are added items to Claim 1 in this amendment, as disclosed above. The step ***wherein each of the network elements utilize the first protocol addresses to transmit data destined for other network elements via the first network*** was the addendum of an earlier amendment, yet was not commented on by Examiner in his response. It is reiterated here because it differentiates the present invention from the Beser et al. reference cited in Examiners Office Action dated March 9, 2005 and additionally further differentiates the present invention from the

new grounds for rejection contained in Examiner's Office Action dated September 21, 2005, the Nicoll et al. reference.

This amendment is fully supported in the specification in the published patent application in paragraph 23 and 31-32. "In one embodiment of the present invention, an address resolution protocol is included that maps the IP address of the destination node based on the TID address received in the TL-1 message. In many present systems in which IP is used over the EDCN, address mapping between the TID addresses of TL-1 messages and IP addresses is accomplished through an address table typically built manually in the gateway network element 110. ***Embodiments of the present invention provide a means by which the mapping table is built automatically***, similar to how the TARP application associates an NSAP address to each TID received for systems in which the Embedded Data Communication Network uses OSI." Nicoll et al. do not teach defining a table in each network element of the plurality of network elements. Furthermore, as noted in paragraphs 31 and 32 of the present invention, ***"All network nodes, regardless of whether they are single or multi-network nodes advertise their Node IP/TID pair to all other nodes on the network to which they are connected. In addition, multi-network nodes advertise their Network IP/TID pairs.*** This mechanism consists of advertising the IP/TID pairs on one network to another network. To advertise the IP/TID pairs ***that will allow the different nodes to build the mapping table 300***, the nodes use a special message, called a 'TIP Hello Message'" (emphasis added).

In further response to the rejection of Claim 1, Applicants note that Nicoll et al. do not teach or suggest the step "wherein each of ***the network elements utilize the first protocol addresses to transmit data*** destined for other network elements via the first network" (emphasis added). Rather in Nicoll et al. a step is taught "wherein a combination of the first and second addresses assigned to each of the first and second plurality of sites is globally unique to each of the first and second plurality of sites" (Claim 1 and Col. 3, lines 51-54). Thus, there is a clear distinction. In the present

invention, only the first protocol addresses are used for transmitting data. The correspondence between various differing network protocols is maintained through the use of the mapping table. The routing works because of the existence of the table defined in each network element and automatically updated. The use of a table is not taught by Nicoll et al. It is also noted that use of the mapping table in present invention includes separate data fields/columns for first protocol network address, a second protocol network address, a port number, and an expiration timer (Figure 3). This highlights further deficiencies in Nicoll et al. Although the present invention advertises an association of the first and second protocol network addresses throughout the network to build the tables, a "combination" as in Nicoll et al. is not used for transmitting. The first and second protocol network addresses are maintained each in their own data field in the mapping table.

In further response to the rejection of Claim 1, Applicants note that Beser et al. fail to make up for the deficiencies with Nicoll et al. discussed above. Although Beser et al. teach the use of a network address table, they fail to teach that the network elements in the first network utilize the addresses corresponding to the first protocol to transmit data to the other network elements via the first network. The present invention clearly differs from Nicoll et al. and Beser et al. who do not teach a method wherein each of the network elements utilize the first protocol addresses to transmit data destined for other network elements via the first network.

Furthermore, although Beser et al. teach "the method and system of the present invention may provide for the maintenance of a network address table such as Address Resolution table (Col. 3, lines 13-15), the address table is maintained in the cable modem termination systems (CMTS) 12 and the cable modems (CM) 16 (Col. 25, lines 21-23). ***In the present invention, however, the mapping table is automatically "maintained in each network element of the plurality of network elements"*** (paragraph 7, emphasis

added). Thus, present invention updates the mapping table automatically and in each network element.

Therefore, in view of the above, applicants respectfully submit that Nicoll et al. fail to teach each and every feature of independent Claims 1 and 10 as required and that Beser et al. fail to make up for deficiencies with Nicoll et al.

Claims 2-9 are dependent claims either directly or ultimately dependent on Claim 1. Claims 11-15 are dependent claims either directly or ultimately dependent on Claim 10. Based on the same unique and novel features of the present invention as described above, namely that Claims 1 and 10, have unique and patentable novel features, it is respectfully asserted that these dependent claims are now in condition for allowance.

Therefore, Applicant submits that the rejection of Claims 1-15 under 35 U.S.C. 103(a) as being unpatentable over Nicoll et al. in view of Beser et al. has now been overcome and respectfully requests that this rejection be withdrawn.

Rejection of Claims 16 and 17 Under 35 U.S.C. 103(a) – Beser et al., Akatsu et al., and Weiman:

Claims 16 and 17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Beser et al. (U.S. Patent No. 6,654,387) in view of Akatsu et al. (U.S. Patent No. 6,378,000) and in further view of Weiman (U.S. Patent No. 6,141,690).

The above arguments with regard to Nicoll et al. and Beser et al. apply with equal force here, and these deficiencies are not remedied by Akatsu et al. or Weiman.

Claim 16 is a dependent claim dependent on Claim 1. Claim 17 is a dependent claim dependent on Claim 11. Based on the same unique and novel features of the

present invention as described above, namely that Claims 1 and 10, have unique and patentable novel features, it is respectfully asserted that these dependent claims are now in condition for allowance.

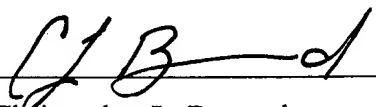
Therefore, Applicant submits that the rejection of Claims 16 and 17 under 35 U.S.C. 103(a) as being unpatentable over Beser et al. in view of Akatsu et al. and in further view of Weiman has now been overcome and respectfully requests that this rejection be withdrawn.

CONCLUSION

Applicants would like to thank Examiner for the attention and consideration accorded the present Application. Should Examiner determine that any further action is necessary to place the Application in condition for allowance, Examiner is encouraged to contact undersigned Counsel at the telephone number, facsimile number, address, or email address provided below. It is not believed that any fees for additional claims, extensions of time, or the like are required beyond those that may otherwise be indicated in the documents accompanying this paper. However, if such additional fees are required, Examiner is encouraged to notify undersigned Counsel at Examiner's earliest convenience.

Respectfully submitted,

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